

U.S. Application No.: 10/764,311
SECOND PRELIMINARY AMENDMENT

Attorney Docket: 3968.106

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Cancel)

Claims 2-19 (Cancelled)

20. (New) A controller for a surgical laser, adapted to control a laser that can be connected to the controller to produce a cut surface inside an eye lens using multiple laser pulses.

21. (New) A controller according to Claim 20, wherein the controller is designed in such a way that the pulse energy of the laser pulse is limited to a range from 1 pJ to 1 μ J.

22. (New) A controller according to Claim 20, wherein the controller is designed so that the size of the bubbles produced in the eye lens by the laser pulse is limited to a diameter of at most 50 μ m.

23. (New) A controller according to Claim 20, wherein the controller is designed so that the thickness of the cut surface is limited to at most 5 μ m.

24. (New) A controller according to Claim 20, wherein the controller is designed in such a way that the cut area is produced by at least 10,000 laser pulses.

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25. (New) A controller according to Claim 20, wherein the controller is designed so that a cut area of 1 mm² to 10 mm² is produced.

26. (New) A controller according to Claim 20, wherein the controller is designed so that two successive laser pulses are located at a distance from one another, such that the faults produced by the laser pulses in the eye lens do not touch or overlap one another.

27. (New) A controller according to Claim 20, wherein the controller is designed to control the laser in order to produce multiple cut surfaces in a predetermined arrangement relative to one another.

28. (New) A controller according to Claim 20, wherein the controller is designed to control the laser so that one or more cut surfaces are produced, to thereby increase the ability of an eye lens to accommodate by at least two diopters.

29. (New) A surgical laser connected to a controller adapted to control the laser to produce a cut surface inside an eye lens using multiple laser pulses.

30. (New) A method for the treatment of an eye lens, wherein a cut surface is produced inside the eye lens using multiple laser pulses.

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31. (New) The method according to Claim 30, wherein the pulse energy of the laser pulse is limited to a range from 1 pJ to 1 μ J.

32. (New) The method according to Claim 30, wherein bubbles are produced in the eye lens by the laser pulse, the bubbles having a diameter of at most 50 μ m.

33. (New) The method according to Claim 30, wherein the thickness of the cut surface is limited to at most 5 μ m.

34. (New) The method according to Claim 30, wherein the cut area is produced by at least 10,000 laser pulses.

35. (New) The method according to Claim 30, wherein a cut area with a surface of 1 mm^2 to 10 mm^2 is produced.

36. (New) The method according to Claim 30, wherein two successive laser pulses are produced at a distance from one another in such a way that the faults produced by the laser pulses in the eye lens do not touch or overlap one another.

37. (New) The method according to Claim 30, wherein multiple cut surfaces are produced in a predetermined arrangement relative to one another.

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38. (New) The method according to Claim 30, wherein one or more cut surfaces are produced in order to increase the ability of accommodation of an eye lens by at least two diopters.